

INTERNATIONAL SEARCH REPORT

International application No.
PCT/KR2004/001744**A. CLASSIFICATION OF SUBJECT MATTER****IPC7 H01Q 3/00**

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC7 H01Q 3/36; 25/00; 21/24

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
KR, JP : IPC as aboveElectronic data base consulted during the international search (name of data base and, where practicable, search terms used)
PAJ, FPD, USPAT, KIPONET**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	JP 06-196927A (N T T IDOU TSUUSHINMOU KK) 17 JUL 1994 See the whole document	1
A	JP 11-355038A (SUMITOMO ELECTRIC IND LTD) 24 DEC 1999 See the whole document	1
P, A	KR 2003-0081626A (GAMMANU CO., LTD) 22 OCT 2003 See the whole document	1

☐ Further documents are listed in the continuation of Box C.☐ See patent family annex.

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search

08 OCTOBER 2004 (08.10.2004)

Date of mailing of the international search report

08 OCTOBER 2004 (08.10.2004)

Name and mailing address of the ISA/KR

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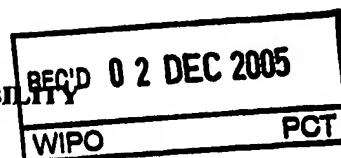
PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY



(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)



Applicant's or agent's file reference P04E1026/PCT	FOR FURTHER ACTION		See Form PCT/IPEA/416
International application No. PCT/KR2004/001744	International filing date(day/month/year) 14 JULY 2004 (14.07.2004)	Priority date (day/month/year) 14 JULY 2003 (14.07.2003)	
International Patent Classification (IPC) or national classification and IPC IPC7 H01Q 3/00			
Applicant ACE TECHNOLOGY et al			

- This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.
- This REPORT consists of a total of 3 sheets, including this cover sheet.
- This report is also accompanied by ANNEXES, comprising:
 - ☐ (sent to the applicant and to the International Bureau) a total of _____ sheets, as follows:
 - ☐ sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).
 - ☐ sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.
 - ☐ (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) _____, containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box relating to Sequence Listing (see Section 802 of the Administrative Instructions).
- This report contains indications relating to the following items:
 - ☒ Box No. I Basis of the report
 - ☐ Box No. II Priority
 - ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
 - ☐ Box No. IV Lack of unity of invention
 - ☒ Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
 - ☐ Box No. VI Certain documents cited
 - ☐ Box No. VII Certain defects in the international application
 - ☐ Box No. VIII Certain observations on the international application

Date of submission of the demand 05 JANUARY 2005 (05.01.2005)	Date of completion of this report 04 NOVEMBER 2005 (04.11.2005)
Name and mailing address of the IPEA/KR  Korean Intellectual Property Office 920 Dunsan-dong, Seo-gu, Daejeon 302-701, Republic of Korea Facsimile No. 82-42-472-7140	Authorized officer JEON, Ki Eock Telephone No. 82-42-481-8128 

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/KR2004/001744

Box No. 1 Basis of the report

1. With regard to the language, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
 - ☐ This report is based on translations from the original language into the following language _____ which is the language of a translation furnished for the purposes of:
 - ☐ international search (under Rules 12.3 and 23.1(b))
 - ☐ publication of the international application (under Rule 12.4)
 - ☐ international preliminary examination (under Rules 55.2 and/or 55.3)
2. With regard to the elements of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:
 - ☒ the international application as originally filed/furnished
 - ☐ the description:
 - pages _____ as originally filed/furnished
 - pages* _____ received by this Authority on _____
 - pages* _____ received by this Authority on _____
 - ☐ the claims:
 - pages _____ as originally filed/furnished
 - pages* _____ as amended (together with any statement) under Article 19
 - pages* _____ received by this Authority on _____
 - pages* _____ received by this Authority on _____
 - ☐ the drawings:
 - pages _____ as originally filed/furnished
 - pages* _____ received by this Authority on _____
 - pages* _____ received by this Authority on _____
 - ☐ the sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing.
3. ☐ The amendments have resulted in the cancellation of:
 - ☐ the description, pages _____
 - ☐ the claims, Nos. _____
 - ☐ the drawings, sheets _____
 - ☐ the sequence listing (*specify*): _____
 - ☐ any table(s) related to sequence listing (*specify*): _____
4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
 - ☐ the description, pages _____
 - ☐ the claims, Nos. _____
 - ☐ the drawings, sheets _____
 - ☐ the sequence listing (*specify*): _____
 - ☐ any table(s) related to sequence listing (*specify*): _____

* If item 4 applies, some or all of those sheets may be marked "superseded."

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/KR2004/001744

Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	1-9	YES
	Claims	None	NO
Inventive step (IS)	Claims	1-9	YES
	Claims	None	NO
Industrial applicability (IA)	Claims	1-9	YES
	Claims	None	NO

2. Citations and explanations (Rule 70.7)

References are made to the following documents :

D1 : KR 2002-0041609 A (03.06.2002)

D2 : JP 06-196927 A (17.07.1994)

The present invention relates to a phase shifter having power deviding function. In claim 1 as the only independent claim, a phase shifter comprises an input port, a power driving means, a first output port with the fixed phase value, a phase shift means and a phase delay means.

D1 describes a phase shifter for controlling beam tilt in wireless communication system and is cited as prior art of this application. The phase shifter of D1 includes a power divider(51), a first and second phase shifter unit(52,53), a first and second delay unit(54,55). There is no a first output port of this invention and the structure of phase shifter means isn't same each other.

D2 is related to a beam tilt antenna. The purpose of D2 is to form two beams separatively and set up independently tilt angles by two beams. So this invention and D2 are different in the technical problem. D2 has two phase shifter(5.1,5.2), two power distributors(6.1,6.2). However D2 doesn't have a first output port and is different from this invention in the structure of phase shifter.

Therefore both D1 and D2 have similar elements but are different in detail. This invention isn't easy to the person in the field of mobile communication technology. So all claims of present invention are considered to have novelty, inventive step, and industrial applicability.